

REMARKS

Claims 47-59, 61, and 64-75 are pending in the application. No new matter has been added.

Status of Claim 61

Claims 60, 62, and 63 were withdrawn in the Response to Election/Restriction Requirement dated March 16, 2007. Applicants point out that claim 61 is incorrectly designated as withdrawn in the Office Action dated June 15, 2007. Applicants respectfully request that the Examiner revise the status of claim 61 to "pending" and examine the claim.

Claim Rejections Under 35 U.S.C. § 102

The Examiner asserted that claims 47-59 and 64-75 are anticipated by Zhou et al. (US 2003/0044118 A1; "Zhou") under 35 U.S.C. § 102(b). Applicants respectfully disagree.

Independent claim 47 recites an apparatus comprising a substrate and a vertically graded refractive index (vGRIN) multilayer structure including a vGRIN film and curved input and output sidewalls. According to the Examiner, the abstract and paragraph [0138] of Zhou disclose these limitations of claim 47. In fact, there is no disclosure whatsoever of curved input and output sidewalls in these sections of Zhou or elsewhere in the reference. Applicants point out that Figure 10 of Zhou, to which paragraph [0138] makes reference, shows a plot of refractive index (n) versus radius (r) for a GRIN optical fiber or waveguide. As discussed in paragraph [0138] of Zhou, a parabolic refractive index distribution may be approximated by a series of small step changes Δn in the refractive index n , as shown in Figure 10. The figure does not show curved input and output sidewalls of an apparatus for controlling the size and phase of an electromagnetic beam.


Since Zhou does not teach or suggest each and every limitation of independent claim 47, the reference cannot anticipate the claim or any claims

depending therefrom. For at least this reason, Applicants submit that pending claims 47-59, 61, and 64-75 are patentable over the prior art of record in this application. Applicants therefore respectfully request that the Examiner withdraw the rejections to the claims under 35 U.S.C. § 102(b).

Conclusion

Applicants respectfully submit that pending claims 47-59, 61, and 64-75 are in condition for allowance. The Examiner is invited to contact the undersigned agent for Applicants via telephone if such a discussion will expedite prosecution of this application.

Respectfully submitted,


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